	Application No.	Applicant(s)
Notice of Allowability	10/741,651	EMEOTT ET AL.
	Examiner	Art Unit
	Anh-Vu H Ly	2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *application filed December 19, 2003*.

2. ☒ The allowed claim(s) is/are *1-24*.

3. ☒ The drawings filed on *19 December 2003* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

         3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

     (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

         1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

     (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with

Scott M. Garrett on February 25, 2005.

The application has been amended as follows:

In The Claims

1.   (Currently Amended) A method of performing power save operation in a wireless local

area network (WLAN) by a mobile station while performing voice communications, comprising:

admitting a reserved traffic stream at an access point, including establishing a reserved

buffer at the access point for buffering data corresponding to the reserved traffic stream to be

transmitted to the mobile station;

placing a WLAN subsystem of the mobile station in a low power state;

waking up [a] the WLAN subsystem of the mobile station from [a] the low power state in

response to the occurrence of a service interval timer event, the service interval timer for timing

a service interval, the service interval defining a real time duration of a voice frame;

transmitting a polling frame to the access point over [the] a WLAN channel, the polling

frame identifying the reserved traffic stream and including an aggregation indicator;

in response to transmitting the polling frame, receiving an aggregate response at the

mobile station over the WLAN channel, wherein the aggregate response includes at least one

frame of data from an aggregate buffer of the access point, the aggregate buffer for buffering

both unreserved and reserved data for the mobile station, and wherein receiving the aggregate

response continues until the aggregate buffer is empty or a service time period expires; and

upon receiving the aggregate response, setting the WLAN subsystem into the low power

state.

10.   (Currently Amended) A method of facilitating power save operation by an access point in

a wireless local area network (WLAN) by a mobile station while performing voice

communications, comprising:

admitting a reserved traffic stream at the access point, including establishing a reserved

buffer at the access point for buffering data corresponding to the reserved traffic stream to be

transmitted to [the] a mobile station, the reserved buffer and unreserved buffer forming an

aggregate buffer at the access point wherein unreserved data is buffered in the unreserved buffer;

placing a WLAN subsystem of the mobile station in a low power state;

waking up the WLAN subsystem of the mobile station from the low power state in

response to the occurrence of a service interval timer event, the service interval timer for timing

a service interval, the service interval defining a real time duration of a voice frame;

receiving a polling frame at the access point over [the] a WLAN channel from the mobile

station, the polling frame identifying the reserved traffic stream;

checking the aggregate buffer for buffered data to be sent to the mobile station; and

transmitting an aggregate response to the mobile station over the WLAN channel, the aggregate response being transmitted by the access point and including data in the aggregate buffer, the transmitting continuing until the aggregate buffer is empty or until a service time period is reached.

Claims 13 and 21, in line 4, replace "response frame" with - -aggregate response- -.

Claim 16, in line 2, replace "response frame" with - -aggregate response- -.

Claim 19, in line 1, replace "is" with - -in- -; in line 10, replace "a low power" with - -the low power- -; and in line 26, replace "response frame" with - -aggregate response- -.

Allowable Subject Matter

2.   Claims 1-24 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest placing a WLAN subsystem of the mobile station in a low power state; waking up the WLAN subsystem of the mobile station from the low power state in response to the occurrence of a service interval timer event, the service interval timer for timing a service interval, the service interval defining a real time duration of a voice frame; transmitting a polling frame to the access point over the WLAN channel, the polling frame identifying the reserved traffic stream and including an aggregation indicator; and in response to transmitting the polling frame, receiving an aggregate response at the mobile station, wherein the aggregate response includes at least one frame of data from an aggregate buffer of the access point, as specified in independent claims 1, 10, and 19.

Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Ginzburg et al (US Pub 2004/0264396 A1) discloses method for power saving in a

WLAN.

Chen et al (US Pub 2004/0253996 A1) discloses method and system for power saving in

a wireless local area network.

Liu (US Pub 2005/0009578 A1) discloses optimal power saving scheduler for 802.11E

APSD.

Liu et al (US Pub 2004/0190467 A1) discloses power saving mechanism for WLANs via

schedule information vector.

Lindskog et al (US Pub 2002/0132603 A1) discloses method for power savings in a

mobile terminal.

Kandala (US Pub 2004/0131019 A1) discloses system and method for synchronizing an

IEEE 802.11 power save interval.

Nandagopalan et al (US Pub 2003/0093526 A1) discloses apparatus and method for

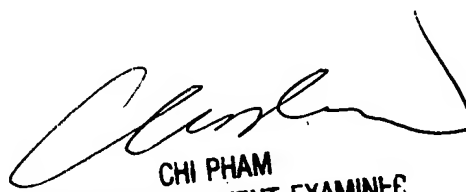providing quality of service signaling for wireless MAC layer.

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The

examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600   3/4/05